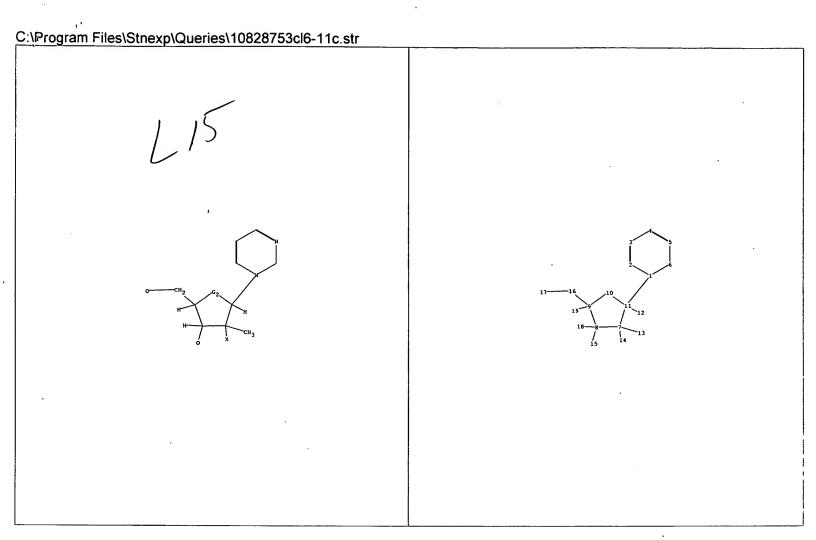
EAST Search History

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EAST Search History

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  Ll
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  L2
                0 S L1 SSS SAM
 L3
               2 S L1 FULL
      FILE 'CAPLUS' ENTERED AT 13:17:31 ON 19 MAR 2007
 L4
      FILE 'REGISTRY' ENTERED AT 13:42:33 ON 19 MAR 2007
 L5
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               0 S L5 SSS SAM .
0 S L5 FULL
 L6
 L7
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L8
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L9
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L10
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L11
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L12
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L13
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L14
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           STRUCTURE UPLOADED
L15
L16
             0 S L15 SSS SAM
L17
             11 S L15 FULL
     FILE 'CAPLUS' ENTERED AT 14:10:58 ON 19 MAR 2007
L18
            6 S L17
```



chain nodes:

12 13 14 15 16 17 18 19

ring nodes:

1 2 3 4 5 6 7 8 9 10 11

chain bonds:

1-11 7-13 7-14 8-15 8-18 9-16 9-19 11-12 16-17

ring bonds:

1-2 1-6 2-3 3-4 4-5 5-6 7-8 7-11 8-9 9-10 10-11

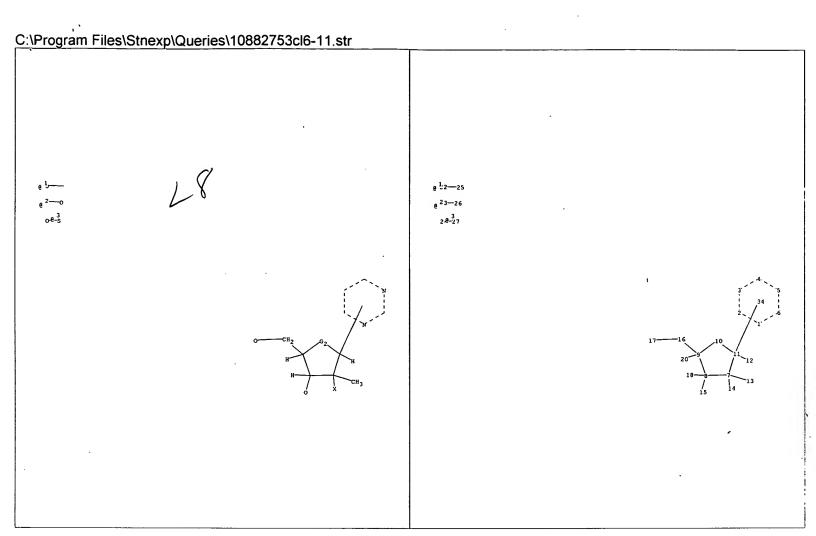
exact/norm bonds:

1-2 1-6 1-11 2-3 3-4 4-5 5-6 7-8 7-11 7-13 7-14 8-9 8-15 8-18 9-10 9-16 9-19 10-11 11-12 16-17

G2:C,O,S,N,Se

Match level:

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom 11:Atom 12:CLAS\$13:CLAS\$14:CLAS\$15:CLAS\$16:CLAS\$17:CLAS\$18:CLAS\$19:CLAS\$



chain nodes:

12 13 14 15 16 17 18 20 22 23 24 25 26 27

ring nodes:

1 2 3 4 5 6 7 8 9 10 11

chain bonds:

7-13 7-14 8-15 8-18 9-16 9-20 11-12 16-17 22-25 23-26 24-27

ring bonds:

1-2 1-6 2-3 3-4 4-5 5-6 7-8 7-11 8-9 9-10 10-11

exact/norm bonds:

1-2 1-6 2-3 3-4 4-5 5-6 7-8 7-11 7-13 7-14 8-9 8-15 8-18 9-10 9-16 9-20 10-11 11-12 16-17 22-25 23-26 24-27

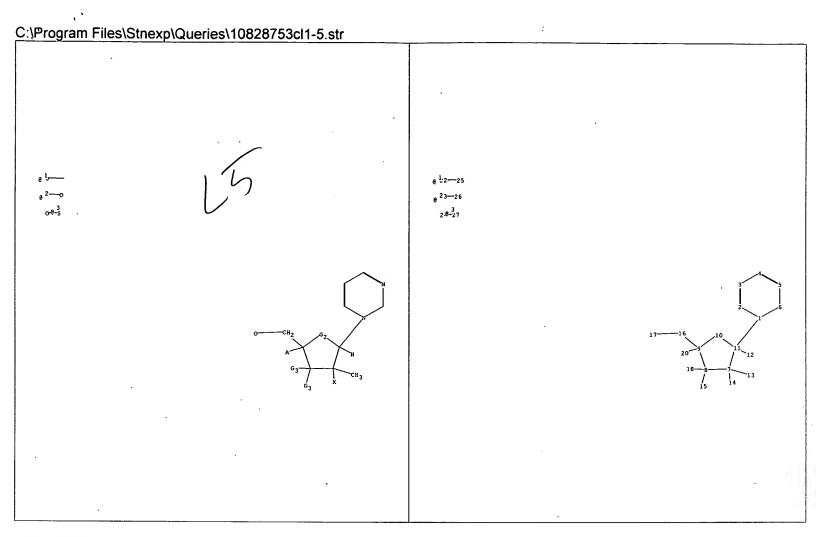
G1:H,Ak

G2:C,O,S,N,Se

G3:C,H,S,N,Cl,Br,F,I,[*1],[*2],[*3]

Match level:

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom 11:Atom 12:CLAS\$13:CLAS\$14:CLAS\$ 15:CLAS\$16:CLAS\$17:CLAS\$18:CLAS\$20:CLAS\$22:CLAS\$23:CLAS\$24:CLAS\$25:CLAS\$26:CLAS\$27:CLAS\$34:CLAS\$



chain nodes:

12 13 14 15 16 17 18 20 22 23 24 25 26 27

ring nodes:

1 2 3 4 5 6 7 8 9 10 11

chain bonds:

1-11 7-13 7-14 8-15 8-18 9-16 9-20 11-12 16-17 22-25 23-26 24-27

ring bonds:

1-2 1-6 2-3 3-4 4-5 5-6 7-8 7-11 8-9 9-10 10-11

exact/norm bonds:

1-2 1-6 1-11 2-3 3-4 4-5 5-6 7-8 7-11 7-13 7-14 8-9 8-15 8-18 9-10 9-16 9-20 10-11 11-12 16-17 22-25 23-26 24-27

G1:H,Ak

G2:C,O,S,N,Se

G3:C,H,S,N,Cl,Br,F,I,[*1],[*2],[*3]

Match level:

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom 11:Atom 12:CLAS\$13:CLAS\$14:CLAS\$ 15:CLAS\$16:CLAS\$17:CLAS\$18:CLAS\$20:CLAS\$22:CLAS\$23:CLAS\$24:CLAS\$25:CLAS\$26:CLAS\$27:CLAS\$

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Welcome to STN International! Enter x:x
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LOGINID:ssspta1600txm

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

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NEWS
                 Web Page URLs for STN Seminar Schedule - N. America
                  "Ask CAS" for self-help around the clock
NEWS
                 CA/CAplus pre-1967 chemical substance index entries enhanced
NEWS
         DEC 18
                 with preparation role
NEWS
         DEC 18
                 CA/CAplus patent kind codes updated
NEWS
         DEC 18
                 MARPAT to CA/Caplus accession number crossover limit increased
                 to 50,000
 NEWS
         DEC 18
                 MEDLINE updated in preparation for 2007 reload
NEWS
         DEC 27
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NEWS
         JAN 08
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 NEWS
         JAN 16
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NEWS 10
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NEWS 11
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NEWS 12
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NEWS 13
         JAN 22
                 CA/CAplus enhanced with patent applications from India
NEWS 14
         JAN 29
                 PHAR reloaded with new search and display fields
         JAN 29
NEWS 15
                 CAS Registry Number crossover limit increased to 300,000 in
                 multiple databases
NEWS 16
         FEB 15
                 PATDPASPC enhanced with Drug Approval numbers
NEWS 17
         FEB 15
                 RUSSIAPAT enhanced with pre-1994 records
NEWS 18
         FEB 23
                 KOREAPAT enhanced with IPC 8 features and functionality
NEWS 19
         FEB 26
                 MEDLINE reloaded with enhancements
NEWS 20
         FEB 26
                 EMBASE enhanced with Clinical Trial Number field
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NEWS 21
         FEB 26
NEWS 22
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NEWS 23
         FEB 26
                 CAS Registry Number crossover limit increased from 10,000
                 to 300,000 in multiple databases
         MAR 15
                 WPIDS/WPIX enhanced with new FRAGHITSTR display format
                 CASREACT coverage extended
NEWS 25 MAR 16
NEWS EXPRESS NOVEMBER 10 CURRENT WINDOWS VERSION IS V8.01c, CURRENT
              MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
              AND CURRENT DISCOVER FILE IS DATED 25 SEPTEMBER 2006.
NEWS HOURS
              STN Operating Hours Plus Help Desk Availability
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              Welcome Banner and News Items
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              For general information regarding STN implementation of IPC 8
NEWS X25
              X.25 communication option no longer available
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 FILE 'HOME' ENTERED AT 13:15:49 ON 19 MAR 2007
=> file reg
COST IN U.S. DOLLARS
                                                SINCE FILE
                                                                TOTAL
                                                     ENTRY
                                                              SESSION
FULL ESTIMATED COST
                                                      0.21
                                                                 0.21
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FILE 'REGISTRY' ENTERED AT 13:16:05 ON 19 MAR 2007 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

09/982, 315

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STRUCTURE FILE UPDATES: 16 MAR 2007 HIGHEST RN 926905-73-9 DICTIONARY FILE UPDATES: 16 MAR 2007 HIGHEST RN 926905-73-9

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http://www.cas.org/ONLINE/UG/regprops.html

Uploading C:\Program Files\Stnexp\Queries\10828753species.str

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L1 HAS NO ANSWERS

L1

G1 H, Ak

Structure attributes must be viewed using STN Express query preparation.

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100.0% PROCESSED

8 ITERATIONS

0 ANSWERS

SEARCH TIME: 00.00.01

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FULL FILE PROJECTIONS: ONLINE **COMPLETE**

COMPLETE BATCH

PROJECTED ITERATIONS:

8 TO 329

PROJECTED ANSWERS:

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130 ITERATIONS 100.0% PROCESSED SEARCH TIME: 00.00.01

2 ANSWERS

L3

2 SEA SSS FUL L1

=> d 1-2 13

L3 ANSWER 1 OF 2 REGISTRY COPYRIGHT 2007 ACS on STN

RN

817204-38-9 REGISTRY Entered STN: 20 Jan 2005 ED

Cytidine, 2'-deoxy-2'-fluoro-2'-methyl-, monohydrochloride, (2'R)- (9CI) CN (CA INDEX NAME)

FS STEREOSEARCH

MF C10 H14 F N3 O4 . C1 H

SR CA

LC STN Files: CA, CAPLUS, PROUSDDR, SYNTHLINE, TOXCENTER, USPATFULL

(817204-33-4) CRN

Absolute stereochemistry. Rotation (+).

HC1

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1907 TO DATE)

2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

ANSWER 2 OF 2 REGISTRY COPYRIGHT 2007 ACS on STN L3

RN

817204-33-4 REGISTRY Entered STN: 20 Jan 2005 ED

Cytidine, 2'-deoxy-2'-fluoro-2'-methyl-, (2'R)- (9CI) (CA INDEX NAME)

OTHER NAMES:

CN PSI 6130

FS STEREOSEARCH

MF C10 H14 F N3 O4

CI COM

SR CA

STN Files: CA, CAPLUS, PROUSDDR, SYNTHLINE, TOXCENTER, USPATFULL LC

Absolute stereochemistry. Rotation (+).

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

- 4 REFERENCES IN FILE CA (1907 TO DATE)
- 4 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> file caplus COST IN U.S. DOLLARS

FULL ESTIMATED COST

SINCE FILE TOTAL ENTRY SESSION 176.45 176.66

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=> s 13

L4 4 L3

=> d bib abs hitstr 1-4 14

- L4 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2007 ACS on STN
- AN 2006:478128 CAPLUS
- DN 145:202057
- TI Inhibition of hepatitis C replicon RNA synthesis by $\beta\text{-D-2'-deoxy-2'-fluoro-2'-C-methylcytidine:}$ a specific inhibitor of hepatitis C virus replication
- AU Stuyver, Lieven J.; McBrayer, Tamara R.; Tharnish, Phillip M.; Clark.
 Jeremy; Hollecker, Laurent; Lostia, Stefania; Nachman, Tammy; Grier,
 Jason; Bennett, Matthew A.; Xie, Meng-Yu; Schinazi, Raymond F.; Morrey,
 John D.; Julander, Justin L.; Furman, Phillip A.; Otto, Michael J.
- CS Pharmasset Inc, Princeton, NJ, USA
- SO Antiviral Chemistry & Chemotherapy (2006), 17(2), 79-87 CODEN: ACCHEH; ISSN: 0956-3202
- PB International Medical Press, Ltd.
- DT Journal
- LA English
- β -D-2'-Deoxy-2'-fluoro-2'-C-methylcytidine (PSI-6130) is a cytidine analog with potent and selective anti-hepatitis C virus (HCV) activity in the subgenomic HCV replicon assay, 90% effective concentration (EC90) = $4.6 \pm$ 2.0 μM . The spectrum of activity and cytotoxicity profile of PSI-6130 was evaluated against a diverse panel of viruses and cell types, and against two addnl. HCV-1b replicons. The S282T mutation, which confers resistance to 2'-C-Me adenosine and other 2'-methylated nucleosides, showed only a 6.5-fold increase in EC90. When assayed for activity against bovine diarrhoea virus (BVDV), which is typically used as a surrogate assay to identify compds. active against HCV, PSI-6130 showed no anti-BVDV activity. Weak antiviral activity was noted against other flaviviruses, including West Nile virus, Dengue type 2, and yellow fever virus. These results indicate that PSI-6130 is a specific inhibitor of HCV. PSI-6130 showed little or no cytotoxicity against various cell types, including human peripheral blood mononuclear and human bone marrow progenitor cells. No mitochondrial toxicity was observed with PSI-6130. reduced activity against the RdRp S282T mutant suggests that PSI-6130 is an inhibitor of replicon RNA synthesis. Finally, the no-effect dose for mice treated i.p. with PSI-6130 for six consecutive days was ≥ 100 mg/kg per day.
- IT 817204-33-4, PSI 6130
 RL: ADV (Adverse effect, including toxicity); DMA (Drug mechanism of action); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(PSI-6130 inhibition of hepatitis C replicon RNA synthesis)
RN 817204-33-4 CAPLUS
CN Cytidine, 2'-deoxy-2'-fluoro-2'-methyl-, (2'R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

RE.CNT 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L4 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2006:103884 CAPLUS
DN 144:171198
TI Preparation of alkyl-substituted 2-deoxy-2-fluoro-D-ribofuranosyl pyrimidine and purine nucleoside analogs via condensation of the lactone
```

to nucleosides as potential antiviral agents
IN Wang, Peiyuan; Stec, Wojciech; Clark, Jeremy; Chun, Byoung-Kwon; Shi,

Junxing; Du, Jinfa
PA Pharmasset, Inc., USA
SO PCT Int. Appl. 34 pp

FOO PCT Int. Appl., 34 pp. CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

I UIV.	CNII																
	PATENT NO.			KIND DATE		APPLICATION NO.						DATE					
					-												
ΡI	WO 2006	0124	40		A2		2006	0202	1	WO 2	005-1	US25	916		2	0050°	721
	WO 2006	WO 2006012440		А3	A3 2006			0060727									
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							DE,										
		GE,	GH,	GM,	HR,	HU,	ID,	IL,	IN,	IS,	JP,	KE,	KG,	KM,	KP,	KR,	KZ,
		LC,	LK,	LR,	LS,	LT,	LU,	LV,	MA,	MD,	MG,	MK,	MN,	MW,	MX,	MZ,	NA,
		NG,	NI,	NO,	ΝZ,	OM,	PG,	PH,	PL,	PT,	RO,	RU,	SC,	SD,	SE,	SG,	SK,
		SL,	SM,	SY,	ТJ,	TM,	TN,	TR,	TT,	TZ,	UA,	ŪG,	US,	UZ,	VC,	VN,	YU,
		ZA,	ZM,	zw													
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		GM,	KE,	LS,	MW,	ΜZ,	NA,	SD,	SL,	SZ,	ΤZ,	ŪG,	ZM,	ZW,	AM,	ΑZ,	BY,
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	US 2006						2006	0907	1	US 2	006-3	3535	97		2	00602	213
PRAI							2004										
•	US 2004						2004	0909									
	US 2005	-185	988		A 1		2005	0721									
os	MARPAT	144:	1711	98													

11 353,597

Claims to meth of molecular reports in making or all and a second s

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB A process for preparing of 2-deoxy-2-fluoro-2-methyl-D-ribonolactones, I, wherein R1 and R2 can independently be H, CH3, acetyl, benzoyl, pivaloyl, 4-nitrobenzoyl, 3-nitrobenzoyl, 2-nitrobenzoyl, 4-chlorobenzoyl, 3-chlorobenzoyl, 2-chlorobenzoyl, 4-methylbenzoyl, 3-methylbenzoyl, 2-methylbenzoyl, 4-phenylbenzoyl, benzyl, 4-methoxybenzyl, trityl, trialkylsilyl, t-butyl-dialkylsilyl, t-butyldiphenylsilyl, TIPDS, THP, MOM, or MEM are prepared and used in the condensation to 2-deoxy-2-fluoro-D-ribofuranosyl pyrimidine and purine nucleoside analogs II and III, wherein X is a halogen; Y is N or CH; Z is a halogen, hydroxyl, ether, thiol, thioether, (un)substituted amine or alkyl; R1' is alkyl, vinyl, ethynyl; R2' and R3' can be same or different H, alkyl, arylalkyl, acyl, cyclic acetal such as 2',3'-O-isopropylidene or

GT

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IT

2',3-O-benzylidene, or 2',3'-cyclic carbonate; R4, R5, and R6 are independently H, halogen, hydroxyl, ether, thiol, thioether, N3, (un)substituted amine, (un)substituted amido, alkyl, halogenated alkyl, alkenyl, halogenated alkenyl, alkynyl, halogenated alkynyl, hydroxy alkyl, alkoxy are prepared and are potential anti-HCV agents. Specifically, IV was prepared (no yield, claimed) via condensation, alkylation and stereoselective fluorination reactions and can exhibit potential use as an anti-HCV agent.

RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)

(preparation of alkyl-substituted 2-deoxy-2-fluoro-D-ribofuranosyl pyrimidine and purine nucleoside analogs via condensation of the lactone to nucleosides)

RN 817204-33-4 CAPLUS

CN Cytidine, 2'-deoxy-2'-fluoro-2'-methyl-, (2'R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

L4 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2007 ACS on STN AN 2005:648160 CAPLUS DN 143:248607 ΤI Design, Synthesis, and Antiviral Activity of 2'-Deoxy-2'-fluoro-2'-Cmethyl sytidine, a Potent Inhibitor of Hepatitis C Virus Replication Clark, Jeremy L.; Hollecker, Laurent; Mason, J. Christian; Stuyver, Lieven J.; Tharnish, Phillip M.; Lostia, Stefania; McBrayer, Tamara R.; Schinazi, Raymond F.; Watanabe, Kyoichi A.; Otto, Michael J.; Furman, Phillip A.; Stec, Wojciech J.; Patterson, Steven E.; Pankiewicz, Krzysztof W. Pharmasset, Inc., Princeton, NJ, 08540, USA
Journal of Medicinal Chemistry (2005), 48(17), 5504-5508 CS SO CODEN: JMCMAR; ISSN: 0022-2623 PB American Chemical Society DT Journal LA English AB The pyrimidine nucleoside- β-D-2'-deoxy-2'-fluoro-2'-C-methylcytidine (I) was designed as a hepatitis C virus RNA-dependent RNA polymerase (HCV RdRp) inhibitor. The title compound was obtained by a DAST fluorination of N4-benzoyl-1-(2-methyl-3,5-di-O-benzoyl- β -D-arabinofuranosyl)cytosine to provide N4-benzoyl-1-(2-fluoro-2-methyl-3,5-di-0-benzoyl-β-Dribofuranosyl)cytosine. The protected 2'-C-methylcytidine was obtained as a byproduct from the DAST fluorination and allowed for the preparation of two biol. active compds. from a common precursor. Compound I and 2'-C-methylcytidine were assayed in a sub-genomic HCV replicon assay system and found to be potent and selective inhibitors of HCV replication. Compd.I shows increased inhibitory activity in the HCV replicon assay compared to 2'-C-methylcytidine and low cellular toxicity. ΤТ 817204-33-4P RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent) (design, synthesis via fluorination, and antiviral activity of 2'-deoxy-2'-fluoro-2'-C-methyl-cytidine, a potent inhibitor of

Hepatitis C virus replication)
RN 817204-33-4 CAPLUS
CN Cytidine, 2'-deoxy-2'-fluoro-2'-methyl-, (2'R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

ΙT 817204-38-9P

> RL: SPN (Synthetic preparation); PREP (Preparation) (design, synthesis via fluorination, and antiviral activity of 2'-deoxy-2'-fluoro-2'-C-methyl-cytidine, a potent inhibitor of Hepatitis C virus replication)

RN

817204-38-9 CAPLUS Cytidine, 2'-deoxy-2'-fluoro-2'-methyl-, monohydrochloride, (2'R)- (9CI) (CA INDEX NAME) CN .

Absolute stereochemistry. Rotation (+).

● HCl

RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

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ANSWER 4 OF 4 CAPLUS COPYRIGHT 2007 ACS on STN
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2005:34765 CAPLUS AN

DN 142:94074

ΤI Preparation of modified fluorinated (2'R)-2'-deoxy-2'-fluoro-2'-C-methyl nucleoside analogs as antiviral agents

Clark, Jeremy IN

PA Pharmasset, Ltd., Barbados PCT Int. Appl., 228 pp.

so

CODEN: PIXXD2

DT Patent LA

English

FAN.	CNT 1																		
PATENT NO.					KIND DATE		APPLICATION NO.						DATE						
PΙ	WO 2									1	WO 2	004-1	US12	472		20040421			
	WO 2	0050	0314	17		А3		2005	0303										
		W:	ΑE,	ΑG,	AL,	AM,	ΑT,	ΑU,	ΑZ,	BA,	BB,	BG,	BR,	BW,	BY,	BZ,	CA,	CH,	
			CN,	co,	CR,	CU,	CZ,	DE,	DK,	DM,	DZ,	EC,	ΕE,	EG,	ES,	FI,	GB,	GD,	
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	ED 1	6227	66	<i>)</i> /		AT		2005	0113		05 2	004-	7750	22		21	3040	421	
	EP 1633766 R: AT, BE, CH,																		
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	CN 1816558 . A						20060809 CN 2004-80019148								20040421				

097487.315

	JP 2006526629	T	20061124	JP 2006-513231	20040421
	NO 2005006221	Α	20051228	NO 2005-6221	20051228
PRAI	US 2003-474368P	P	20030530		
	WO 2004-US12472	W	20040421		•
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The disclosed invention provides nucleoside analogs I, wherein B is purine and pyrimidine nucleobase; X is O, S, CH2, Se, NH, N-alkyl, CHW, C(W)2; W is F, Cl, Br, iodo; R1 is H, phosphate, H-phosphonate, acyl, Ph, alkyl, carboxyalkylamino, sulfonate ester, peptide, amino acid, sugar reside; R2 and R2' are independently H, alkyl, alkenyl, alkynyl, vunyl, N3, CN, halogen, NO2, ester, alkoxy, thioalkyl, sulfoxide, sulfonyl; R6 is alkyl, CN, Me, OMe, OEt, CH2OH, CH2F, N3, CHCN, CH2N3, CH2NH2, CH2NHMe, CH2NMe2, alkylne; and methods of treating a Flaviviridae infection, including hepatitis C virus, West Nile Virus, yellow fever virus, and a rhinovirus infection in a host, including animals, and especially human, using a (2'R)-2'-deoxy-2'-fluoro-2'-C-Me nucleosides, or a pharmaceutically acceptable salt or prodrug thereof. Thus, (2'R)-2'-deoxy-2'-fluoro-2'-Cmethylcytidine was prepared and tested as antiviral agent. The effects the nucleoside analogs tested on human bone marrow cells are reported. (2'R)-2'-deoxy-2'-fluoro-2'-C-methylcytidine shows activity against Rhinovirus, West Nile virus, Yellow Fever virus, and Dengue virus. Cytotoxicity and effect of nucleoside analogs on human bone marrow cells are reported. 817204-33-4P

RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses) (preparation of modified fluorinated (2'R)-2'-deoxy-2'-fluoro-2'-C-Me nucleoside analogs as antiviral agents)

RN 817204-33-4 CAPLUS

CN Cytidine, 2'-deoxy-2'-fluoro-2'-methyl-, (2'R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

IT 817204-38-9P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES

(preparation of modified fluorinated (2'R)-2'-deoxy-2'-fluoro-2'-C-Me nucleoside analogs as antiviral agents)

RN 817204-38-9 CAPLUS

CN Cytidine, 2'-deoxy-2'-fluoro-2'-methyl-, monohydrochloride, (2'R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

09/982

● HCl

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-09/902,315

(FILE 'HOME' ENTERED AT 13:15:49 ON 19 MAR 2007)

FILE 'REGISTRY' ENTERED AT 13:16:05 ON 19 MAR 2007 STRUCTURE UPLOADED 0 S L1 SSS SAM 2 S L1 FULL

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L2 L3

FILE 'CAPLUS' ENTERED AT 13:17:31 ON 19 MAR 2007 ${\tt 4\ S\ L3}$

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Welcome to STN International! Enter x:x

LOGINID:ssspta1600txm

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* * * * * RECONNECTED TO STN INTERNATIONAL * * * * * * SESSION RESUMED IN FILE 'REGISTRY' AT 14:10:13 ON 19 MAR 2007 FILE 'REGISTRY' ENTERED AT 14:10:13 ON 19 MAR 2007 COPYRIGHT (C) 2007 American Chemical Society (ACS)

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http://www.cas.org/ONLINE/UG/regprops.html

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L15 STRUCTURE UPLOADED

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SAMPLE SEARCH INITIATED 14:10:45 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 10 TO ITERATE

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FULL FILE PROJECTIONS: ONLINE **COMPLETE**

BATCH **COMPLETE**

PROJECTED ITERATIONS: 11 TO 389

PROJECTED ANSWERS: 0 TO 0

10/828,753 L16 O SEA SSS SAM L15 => s 115 full FULL SEARCH INITIATED 14:10:52 FILE 'REGLETRY' FULL SCREEN SEARCH COMPLETED -148 TO ITERATE 100.0% PROCESSED 148 ITERATIONS 11 ANSWERS SEARCH TIME: 00.00 T.17 11 SEA SSS FUL L15 => file caplus COST IN U.S. DOLLARS SINCE FILE TOTAL ENTRY SESSION FULL ESTIMATED COST 172.10 719.54 DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) SINCE FILE TOTAL ENTRY SESSION CA SUBSCRIBER PRICE 0.00 -3.12FILE 'CAPLUS' ENTERED AT 14:10:58 ON 19 MAR 2007 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT. PLEASE SEE "HELP USAGETERMS" FOR DETAILS. COPYRIGHT (C) 2007 AMERICAN CHEMICAL SOCIETY (ACS) Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited. FILE COVERS 1907 - 19 Mar 2007 VOL 146 ISS 13 FILE LAST UPDATED: 18 Mar 2007 (20070318/ED) Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at: http://www.cas.org/infopolicy.html => s 1176 L17 L18 => d bib abs hitstr 1-6 118 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN L18 AN 2006:985303 CAPLUS 145.505687 DN Synthesis of 2-deoxy-2-fluoro-2-C-methyl-D-ribofuranoses Clark, Jeremy L.; Mason, J. Christian; Hobbs, Ann J.; Hollecker, Laurent; TΙ ΑIJ Schinazi, Raymond F. CS Pharmasset, Inc., Tucker, GA, USA so Journal of Carbohydrate Chemistry (2006), 25(6), 461-470 CODEN: JCACDM; ISSN: 0732-8303 PB Taylor & Francis, Inc. DT Journal The synthesis of Me 3,5-di-O-benzoyl-2-deoxy-2-fluoro-2-C-methyl- β -Dribofuranoside and the conversion to the corresponding $1\hbox{-} 0\hbox{-}acetyl\hbox{-} 3,5\hbox{-}di\hbox{-} 0\hbox{-}benzoyl\hbox{-} 2\hbox{-}deoxy\hbox{-} 2\hbox{-}fluoro\hbox{-} 2\hbox{-}C\hbox{-}methyl\hbox{-} D\hbox{-}ribofuranose and } 1\hbox{-} 0\hbox{-}acetyl\hbox{-} 3,5\hbox{-}di\hbox{-} 0\hbox{-}benzoyl\hbox{-} 2\hbox{-}deoxy\hbox{-} 2\hbox{-}fluoro\hbox{-} 2\hbox{-}C\hbox{-}methyl\hbox{-} D\hbox{-}ribofuranose and } 1\hbox{-}0\hbox{-}acetyl\hbox{-} 3,5\hbox{-}di\hbox{-} 0\hbox{-}benzoyl\hbox{-} 2\hbox{-}deoxy\hbox{-} 2\hbox{-}fluoro\hbox{-} 2\hbox{-}C\hbox{-}methyl\hbox{-} D\hbox{-}ribofuranose and } 1\hbox{-}0\hbox{-}acetyl\hbox{-} 3,5\hbox{-}di\hbox{-} 0\hbox{-}benzoyl\hbox{-} 2\hbox{-}deoxy\hbox{-} 2\hbox{-}fluoro\hbox{-} 2\hbox{-}C\hbox{-}methyl\hbox{-} D\hbox{-}ribofuranose and } 1\hbox{-}0\hbox{-}acetyl\hbox{-} 3,5\hbox{-}di\hbox{-}0\hbox{-}benzoyl\hbox{-} 2\hbox{-}deoxy\hbox{-} 2\hbox{-}deox$ 1,3,5-tri-O-benzoyl-2-deoxy-2-fluoro-2-C-methyl-D-ribofuranose is reported. The key synthetic step is the fluorination of the tertiary

center of Me 3,5-di-O-benzyl-2-C-methyl- β -D-arabinofuranoside to provide Me 3,5-di-O-benzyl-2-deoxy-2-fluoro-2-C-methyl- β -D-

(synthesis of 2-deoxy-2-fluoro-2-C-methyl-D-ribofuranoses via

fluorination of the tertiary center of Me 3,5-di-O-benzyl-2-C-methyl-

RL: SPN (Synthetic preparation); PREP (Preparation)

IT

ribofuranoside.

817204-32-3 CAPLUS

817204-32-3P 874638-94-5P

β-D-arabinofuranosides)

CN Cytidine, N-benzoyl-2'-deoxy-2'-fluoro-2'-methyl-, 3',5'-dibenzoate, (2'R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

RN 874638-94-5 CAPLUS

CN Benzamide, N-[1-[(2R)-3,5-di-O-benzoyl-2-deoxy-2-fluoro-2-methyl-α-D-erythro-pentofuranosyl]-1,2-dihydro-2-oxo-4-pyrimidinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RE.CNT 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2006:478128 CAPLUS

DN 145:202057

TI Inhibition of hepatitis C replicon RNA synthesis by β-D-2'-deoxy-2'-fluoro-2'-C-methylcytidine: a specific inhibitor of hepatitis C-virus replication

U Stuyver, Lieven J.; McBrayer, Tamara R.; Tharnish, Phillip M.; Clark, Jeremy; Hollecker, Laurent; Lostia, Stefania; Nachman, Tammy; Grief, Jason; Bennett, Matthew A.; Xie, Meng-Yu; Schinazi, Raymond F.; Morrey, John D.; Julander, Justin L.; Furman, Phillip A.; Otto, Michael J.

CS Pharmasset Inc, Princeton, NJ, USA

SO Antiviral Chemistry & Chemotherapy (2006), 17(2), 79-87

CODEN: ACCHEH; ISSN: 0956-3202

PB International Medical Press, Ltd.

DT Journal

LA English

β-D-2'-Deoxy-2'-fluoro-2'-C-methylcytidine (PSI-6130) is a cytidine analog with potent and selective anti-hepatitis C virus (HCV) activity in the subgenomic HCV replicon assay, 90% effective concentration (EC90) = 4.6 ± 2.0 μM. The spectrum of activity and cytotoxicity profile of PSI-6130 was evaluated against a diverse panel of viruses and cell types, and against two addnl. HCV-lb replicons. The S282T mutation, which confers resistance to 2'-C-Me adenosine and other 2'-methylated nucleosides, showed only a 6.5-fold increase in EC90. When assayed for activity against bovine diarrhoea virus (BVDV), which is typically used as a surrogate assay to identify compds. active against HCV, PSI-6130 showed no anti-BVDV activity. Weak antiviral activity was noted against other flaviviruses, including West Nile virus, Dengue type 2, and yellow fever virus. These results indicate that PSI-6130 is a specific inhibitor of HCV. PSI-6130 showed little or no cytotoxicity against various cell types, including human peripheral blood mononuclear and human bone marrow progenitor cells. No mitochondrial toxicity was observed with PSI-6130. The

reduced activity against the RdRp S282T mutant suggests that PSI-6130 is an inhibitor of replicon RNA synthesis. Finally, the no-effect dose for mice treated i.p. with PSI-6130 for six consecutive days was ≥100 mg/kg per day.

817204-33-4, PSI 6130

RL: ADV (Adverse effect, including toxicity); DMA (Drug mechanism of action); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(PSI-6130 inhibition of hepatitis C replicon RNA synthesis)

RN

817204-33-4 CAPLUS
Cytidine, 2'-deoxy-2'-fluoro-2'-methyl-, (2'R)- (9CI) (CA INDEX NAME) CN

Absolute stereochemistry. Rotation (+).

RE.CNT 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L18
    ANSWER 3 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN
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AN 2006:269477 CAPLUS

DN 144:312289

ΤI Preparation of alkyl-substituted 2-deoxy-2-fluoro-D-ribofuranosyl pyrimidine and purine nucleoside analogs via condensation of the lactone to nucleosides as potential antiviral agents

Chun, Byoung-Kwon; Wang, Peiyuan Pharmasset, Inc., USA PCT Int. Appl., 74 pp. IN

PA

so SODEN PIXXD2

DT Patent

English LA

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			SL,	SM,	SY,	ТJ,	TM,	TN,	TR,	TT,	ΤZ,	UA,	ΰG,	US,	UΖ,	VC,	VN,	YU,
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	US	2004	-610	035P		P	- 1	2004	0915									
		2005				P	- 1	2005	0329									
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GI							·	/										

11/225 Hels claims to means

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

A process for preparing of 2-deoxy-2-fluoro-2-methyl-D-ribonolactones, I, wherein R1 and R2 can independently be H, CH3, acetyl, benzoyl, pivaloyl, 4-nitrobenzoyl, 3-nitrobenzoyl, 2-nitrobenzoyl, 4-chlorobenzoyl, 3-chlorobenzoyl, 2-chlorobenzoyl, 4-methylbenzoyl, 3-methylbenzoyl, 2-methylbenzoyl, 4-phenylbenzoyl, benzyl, 4-methoxybenzyl, trityl, trialkylsilyl, t-butyl-dialkylsilyl, t-butyldiphenylsilyl, TIPDS, THP, MOM, or MEM are prepared and used in the condensation to

TΤ

2-deoxy-2-fluoro-D-ribofuranosyl pyrimidine and purine nucleoside analogs. Thus, 2-deoxy-2-fluoro-D-ribofuranosyl pyrimidine and purine nucleoside analogs II and III, wherein X is a halogen; Y is N or CH; Z is a halogen, hydroxyl, ether, thiol, thioether, (un)substituted amine or alkyl; R1' is alkyl, vinyl, ethynyl; R2' and R3' can be same or different H, alkyl, arylalkyl, acyl, cyclic acetal such as 2',3'-O-isopropylidene or 2',3'-O-benzylidene, or 2',3'-cyclic carbonate; R4, R5, and R6 are independently H, halogen, hydroxyl, ether, thiol, thioether, N3, (un)substituted amine, (un)substituted amido, alkyl, halogenated alkyl, alkenyl, halogenated alkenyl, alkynyl, halogenated alkyl, alkoxy are prepared and are potential anti-HCV agents. Specifically, IV was prepared in 88 % yield via condensation, alkylation and stereoselective fluorination reactions and can exhibit potential use as an anti-HCV agent.

RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)

(preparation of alkyl-substituted 2-deoxy-2-fluoro-D-ribofuranosyl pyrimidine and purine nucleoside analogs via condensation of the lactone to nucleosides)

RN 879551-07-2 CAPLUS

CN Cytidine, N-benzoyl-2'-deoxy-2'-fluoro-2'-methyl-, 3',5'-bis(2,2-dimethylpropanoate), (2'R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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T.18
     ANSWER 4 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN
     2006:103884 CAPLUS
DN
     144:171198
TI
     Preparation of alkyl-substituted 2-deoxy-2-fluoro-D-ribofuranosyl
     pyrimidine and purine nucleoside analogs via condensation of the lactone
     to nucleosides as potential antivital agents
Wang, Peiyuan; Stec, Wojciech; Glark, Jeremy; Chun, Byoung-Kwon; Shi,
IN
     Junxing; Du, Jinfa
PΑ
     Pharmasset, Inc., USA
SO
     PCT Int. Appl., 34 pp.
     CODEN: PIXXD2
DT
     Patent
     English
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FAN. CNT 1
     PATENT NO.
                          KIND
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                                              APPLICATION NO.
                                                                       DATE
     WO 2006012440
                           A2
                                  20060202
                                              WO 2005-US25916
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     WO 2006012440
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             CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
             GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ,
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                 LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA,
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PRAI US 2004-589866P
                                  20040721
     US 2004-608320P
                                  20040909
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US 2005-185988

MARPAT 144:171198

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

A process for preparing of 2-deoxy-2-fluoro-2-methyl-D-ribonolactones, I, wherein R1 and R2 can independently be H, CH3, acetyl, benzoyl, pivaloyl, 4-nitrobenzoyl, 3-nitrobenzoyl, 2-nitrobenzoyl, 4-chlorobenzoyl, 4-nitrobenzoyi, 3-nitrobenzoyi, 2-nitrobenzoyi, 4-methylbenzoyi, 3-methylbenzoyi, 2-methylbenzoyi, 4-methylbenzoyi, 4-methylbenzoyi, trityi, trialkylsilyi, t-butyl-dialkylsilyi, t-butyl-dialkylsilyi MOM, or MEM are prepared and used in the condensation to 2-deoxy-2-fluoro-D-ribofuranosyl pyrimidine and purine nucleoside analogs. Thus, 2-deoxy-2-fluoro-D-ribofuranosyl pyrimidine and purine nucleoside analogs II and III, wherein X is a halogen; Y is N or CH; Z is a halogen, hydroxyl, ether, thiol, thioether, (un) substituted amine or alkyl, Rl' is alkyl, vinyl, ethynyl; R2' and R3' can be same or different H, alkyl, arylalkyl, acyl, cyclic acetal such as 2',3'-O-isopropylidene or 2',3-O-benzylidene, or 2',3'-cyclic carbonate; R4, R5, and R6 are independently H, halogen, hydroxyl, ether, thiol, thioether, N3, (un) substituted amine, (un) substituted amido, alkyl, halogenated alkyl, alkenyl, halogenated alkenyl, alkynyl, halogenated alkynyl, hydroxy alkyl, alkoxy are prepared and are potential anti-HCV agents. Specifically, IV was prepared (no yield, claimed) via condensation, alkylation and stereoselective fluorination reactions and can exhibit potential use as an anti-HCV agent.

817204-32-3P 817204-33-4P 874638-82-1P 874638-94-5P 874638-98-9P IT

RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)

(preparation of alkyl-substituted 2-deoxy-2-fluoro-D-ribofuranosyl pyrimidine and purine nucleoside analogs via condensation of the lactone to nucleosides)

RN 817204-32-3 CAPLUS

Cytidine, N-benzoyl-2'-deoxy-2'-fluoro-2'-methyl-, 3',5'-dibenzoate, (2'R) - (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

817204-33-4 CAPLUS RN

Cytidine, 2'-deoxy-2'-fluoro-2'-methyl-, (2'R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

RN 874638-82-1 CAPLUS

Benzamide, N-[1-[(2R)-5-O-benzoyl-2-deoxy-2-fluoro-2-methyl-3-O- $(\texttt{methylsulfonyl}) - \beta - D - \texttt{erythro-pentofuranosyl}] - 1, 2 - \texttt{dihydro-2-oxo-4-dihydro$ pyrimidinyl] - (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 874638-94-5 CAPLUS

Benzamide, N-[1-[(2R)-3,5-di-O-benzoyl-2-deoxy-2-fluoro-2-methyl- α -Derythro-pentofuranosyl]-1,2-dihydro-2-oxo-4-pyrimidinyl]- (9CI) (CA INDEX

Absolute stereochemistry.

874638-98-9 CAPLUS RN

CN Cytidine, N-benzoyl-2'-deoxy-2'-fluoro-2'-methyl-, (2'R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L18 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN

2005:648160 CAPLUS AN

DN 143:248607

Design, Synthesis, and Antiviral Activity of 2'-Deoxy-2'-fluoro-2'-C-methyl-cytidine, a Potent Inhibitor of Hepatitis C Virus Replication (Clark, Jeremy L.; Hollecker, Laurent; Mason, J. Christian; Stuyver, Lieven

ΑU L: Tharhish, Phillip M.; Lostia, Stefania; McBrayer, Tamara R.; Schinazi, Raymond F.; Watanabe, Kyoichi A.; Otto, Michael J.; Furman, Phillip A.; Stec, Wojciech J.; Patterson, Steven E.; Pankiewicz, Krzysztof W. Pharmasset, Inc., Princeton, NJ, 08540, USA

CS

Journal of Medicinal Chemistry (2005), 48(17), 5504-5508 SO

CODEN: JMCMAR; ISSN: 0022-2623

American Chemical Society

DΤ Journal

LA English

The pyrimidine nucleoside- β -D-2'-deoxy-2'-fluoro-2'-C-methylcytidine (I) was designed as a hepatitis C virus RNA-dependent RNA polymerase (HCV RdRp) inhibitor. The title compound was obtained by a DAST fluorination of

IT

N4-benzoyl-1-(2-methyl-3,5-di-O-benzoyl-β-D-arabinofuranosyl)cytosine to provide N4-benzoyl-1-(2-fluoro-2-methyl-3,5-di-O-benzoyl-β-D-ribofuranosyl)cytosine. The protected 2'-C-methylcytidine was obtained as a byproduct from the DAST fluorination and allowed for the preparation of two biol. active compds. from a common precursor. Compound I and 2'-C-methylcytidine were assayed in a sub-genomic HCV replicon assay system and found to be potent and selective inhibitors of HCV replication. Compd.I shows increased inhibitory activity in the HCV replicon assay compared to 2'-C-methylcytidine and low cellular toxicity. 817204-33-4P
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent) (design, synthesis via fluorination, and antiviral activity of

(design, synthesis via fluorination, and antiviral activity of 2'-deoxy-2'-fluoro-2'-C-methyl-cytidine, a potent inhibitor of Hepatitis C virus replication)

RN 817204-33-4 CAPLUS

CN Cytidine, 2'-deoxy-2'-fluoro-2'-methyl-, (2'R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

IT 863329-66-2P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation) (design, synthesis via fluorination, and antiviral activity of 2'-deoxy-2'-fluoro-2'-C-methyl-cytidine, a potent inhibitor of Hepatitis C virus replication)

RN 863329-66-2 CAPLUS

CN Uridine, 2'-deoxy-2'-fluoro-2'-methyl-, (2'R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

IT 817204-32-3P 863329-65-1P RL: RCT (Reactant); SPN (Synthetic prepa

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(design, synthesis via fluorination, and antiviral activity of 2'-deoxy-2'-fluoro-2'-C-methyl-cytidine, a potent inhibitor of Hepatitis C virus replication)

RN 817204-32-3 CAPLUS

CN Cytidine, N-benzoyl-2'-deoxy-2'-fluoro-2'-methyl-, 3',5'-dibenzoate, (2'R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

RN 863329-65-1 CAPLUS

CN Uridine, 2'-deoxy-2'-fluoro-2'-methyl-, 3',5'-dibenzoate, (2'R)- (9CI)
 (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

IT 817204-38-9P

RL: SPN (Synthetic preparation); PREP (Preparation) (design, synthesis via fluorination, and antiviral activity of 2'-deoxy-2'-fluoro-2'-C-methyl-cytidine, a potent inhibitor of Hepatitis C virus replication)

RN 817204-38-9 CAPLUS

CN Cytidine, 2'-deoxy-2'-fluoro-2'-methyl-, monohydrochloride, (2'R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

• HCl

RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2005:34765 CAPLUS

DN 142:94074

TI Preparation of modified fluorinated (2'R)-2'-deoxy-2'-fluoro-2'-C-methyl nucleoside analogs as antiviral agents

IN Clark, Jeremy

PA Pharmasset, Ltd., Barbados

SO PCT Int. Appl., 228 pp. CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

PATENT NO.

KIND DATE

APPLICATION NO.

DATE

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WO 2005003147
                           A2
                                  20050113
                                               WO 2004-US12472
                                                                        20040421
     WO 2005003147
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                                  20050303
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             NO, NZ,
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PRAI US 2003-474368P
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     WO 2004-US12472
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                                  20040421 -
     MARPAT 142:94074
GT
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The disclosed invention provides nucleoside analogs I, wherein B is purine and pyrimidine nucleobase; X is O, S, CH2, Se, NH, N-alkyl, CHW, C(W)2; W is F, Cl, Br, iodo; R1 is H, phosphate, H-phosphonate, acyl, Ph, alkyl, carboxyalkylamino, sulfonate ester, peptide, amino acid, sugar reside; R2 and R2' are independently H, alkyl, alkenyl, alkynyl, vunyl, N3, CN, halogen, NO2, ester, alkoxy, thioalkyl, sulfoxide, sulfonyl; R6 is alkyl, CN, Me, OMe, OEt, CH2OH, CH2F, N3, CHCN, CH2N3, CH2NH2, CH2NHMe, CH2NMe2, alkylne; and methods of treating a Flaviviridae infection, including hepatitis C virus, West Nile Virus, yellow fever virus, and a rhinovirus infection in a host, including animals, and especially human, using a (2'R)-2'-deoxy-2'-fluoro-2'-C-Me nucleosides, or a pharmaceutically acceptable salt or prodrug thereof. Thus, (2'R)-2'-deoxy-2'-fluoro-2'-C-methylcytidine was prepared and tested as antiviral agent. The effects the nucleoside analogs tested on human bone marrow cells are reported. (2'R)-2'-deoxy-2'-fluoro-2'-C-methylcytidine shows activity against Rhinovirus, West Nile virus, Yellow Fever virus, and Dengue virus. Cytotoxicity and effect of nucleoside analogs on human bone marrow cells are reported. 817204-33-4P

RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses) (preparation of modified fluorinated (2'R)-2'-deoxy-2'-fluoro-2'-C-Me nucleoside analogs as antiviral agents)

RN

817204-33-4 CAPLUS Cytidine, 2'-deoxy-2'-fluoro-2'-methyl-, (2'R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

ΙT 817204-38-9P

> RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of modified fluorinated (2'R)-2'-deoxy-2'-fluoro-2'-C-Me nucleoside analogs as antiviral agents)

RN

817204-38-9 CAPLUS
Cytidine, 2'-deoxy-2'-fluoro-2'-methyl-, monohydrochloride, (2'R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

HC1

817204-44-7 TT

> RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(preparation of modified fluorinated (2'R)-2'-deoxy-2'-fluoro-2'-C-Me nucleoside analogs as antiviral agents)

817204-44-7 CAPLUS RN

Cytidine 5'-(tetrahydrogen triphosphate), 2'-deoxy-2'-fluoro-2'-methyl-, (2'R) - (9CI) (CA INDEX NAME)

Absolute stereochemistry.

TΤ 817204-32-3P 817204-37-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of modified fluorinated (2'R)-2'-deoxy-2'-fluoro-2'-C-Menucleoside analogs as antiviral agents)

RN 817204-32-3 CAPLUS

CN Cytidine, N-benzoyl-2'-deoxy-2'-fluoro-2'-methyl-, 3',5'-dibenzoate, (2'R) - (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

RN 817204-37-8 CAPLUS Cytidine, N-benzoyl-2'-deoxy-2'-fluoro-2'-methyl-, 3',5'-bis(trifluoroacetate), (2'R)- (9CI) (CA INDEX NAME) CN

Absolute stereochemistry.

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(FILE 'HOME' ENTERED AT 13:15:49 ON 19 MAR 2007)

FILE 'REGISTRY' ENTERED AT 13:16:05 ON 19 MAR 2007

STRUCTURE UPLOADED

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L3 2 S L1 FULL

FILE 'CAPLUS' ENTERED AT 13:17:31 ON 19 MAR 2007

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FILE 'REGISTRY' ENTERED AT 13:42:33 ON 19 MAR 2007 L5

STRUCTURE UPLOADED

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STRUCTURE UPLOADED

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L15 STRUCTURE UPLOADED

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STRUCTURE FILE UPDATES: 16 MAR 2007 HIGHEST RN 926905-73-9 DICTIONARY FILE UPDATES: 16 MAR 2007 HIGHEST RN 926905-73-9

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http://www.cas.org/ONLINE/UG/regprops.html

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=> d scan 120

L20 32 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN

IN Nucleotidyltransferase, ribonucleate, RNA-dependent (9CI)

MF Unspecified

CI MAN

L20

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):31

L20 32 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN

IN Cytidine, N-benzoyl- (7CI, 9CI)

MF C16 H17 N3 O6

CI COM

Absolute stereochemistry.

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L20 32 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN IN Adenosine, 2'-C-methyl- (8CI, 9CI) MF C11 H15 N5 O4

Absolute stereochemistry.

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L20 32 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN . IN Cytidine, 2'-C-methyl- (8CI, 9CI) MF C10 H15 N3 O5

Absolute stereochemistry.

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L20 32 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN

IN Benzamide, N-(trimethylsilyl)-N-[2-[(trimethylsilyl)oxy]-4-pyrimidinyl](9CI)

MF C17 H25 N3 O2 Si2

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L20 32 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN
IN Disiloxane, 1,3-dichloro-1,1,3,3-tetrakis(1-methylethyl)MF C12 H28 C12 O Si2
CI COM

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L20 32 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN

IN Cytidine, N-benzoyl-3',5'-O-[1,1,3,3-tetrakis(1-methylethyl)-1,3-disiloxanediyl]- (9CI)

MF C28 H43 N3 O7 Si2

Absolute stereochemistry.

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L20 32 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN
IN 9H-Purine, 6-chloro-9-[3,5-O-[1,1,3,3-tetrakis(1-methylethyl)-1,3-disiloxanediyl]-β-D-ribofuranosyl]- (9CI)
MF C22 H37 Cl N4 O5 Si2

Absolute stereochemistry.

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L20 32 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN
IN Cytidine, N-benzoyl-2'-deoxy-2'-oxo-3',5'-O-{1,1,3,3-tetrakis(1-methylethyl)-1,3-disiloxanediyl]- (9CI)
MF C28 H41 N3 O7 Si2

Absolute stereochemistry.

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L20 32 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN
IN 9H-Purine, 6-chloro-9-[3,5-O-[1,1,3,3-tetrakis(1-methylethyl)-1,3-disiloxanediyl]-β-D-erythro-pentofuranos-2-ulos-1-yl]- (9CI)
MF C22 H35 Cl N4 O5 Si2

Absolute stereochemistry.

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L20 32 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN IN Adenosine 5'-(tetrahydrogen triphosphate), 2'-C-methyl- (9CI) MF C11 H18 N5 O13 P3

Absolute stereochemistry.

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L20 32 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN
IN Cytidine 5'-(tetrahydrogen triphosphate), 2'-C-methyl- (9CI)
MF C10 H18 N3 O14 P3

Absolute stereochemistry.

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L20 32 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN

IN β -D-erythro-Pentofuranosid-2-ulose, methyl 3,5-bis-O-(phenylmethyl)-(9CI)

MF C20 H22 O5

Absolute stereochemistry.

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L20 32 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN

IN β -D-Arabinofuranoside, methyl 2-C-methyl-3,5-bis-O-(phenylmethyl)-(9CI)

MF C21 H26 O5

Absolute stereochemistry..

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L20 32 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN

IN β -D-erythro-Pentofuranoside, methyl 2-deoxy-2-fluoro-2-methyl-3,5-bis-O-(phenylmethyl)-, (2R)- (9CI)

MF C21 H25 F O4

Absolute stereochemistry.

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L20 32 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN IN β -D-erythro-Pentofuranoside, methyl 2-deoxy-2-fluoro-2-methyl-, dibenzoate, (2R)- (9CI) MF C21 H21 F O6

Absolute stereochemistry.

**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT **

L20 32 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN

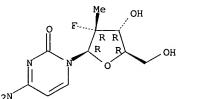
IN Cytidine, N-benzoyl-2'-deoxy-2'-fluoro-2'-methyl-, 3',5'-dibenzoate, (2'R)- (9CI)

MF C31 H26 F N3 O7

Absolute stereochemistry. Rotation (+).

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L20 32 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN
IN Cytidine, 2'-deoxy-2'-fluoro-2'-methyl-, (2'R)- (9CI)
MF C10 H14 F N3 O4
CI COM



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L20 32 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN Benzamide, N-[1,2-dihydro-1-[2-C-methyl-3,5-O-[1,1,3,3-tetrakis(1-methylethyl)-1,3-disiloxanediyl]- β -D-arabinofuranosyl]-2-oxo-4-pyrimidinyl]- (9CI)

MF C29 H45 N3 O7 Si2

Absolute stereochemistry. Rotation (+).

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L20 32 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN

Benzamide, N-[1,2-dihydro-1-(2-C-methyl- β -D-arabinofuranosyl)-2-oxo-4pyrimidinyl] - (9CI) C17 H19 N3 O6

MF

Absolute stereochemistry. Rotation (+).

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

REGISTRY COPYRIGHT 2007 ACS on STN L20 32 ANSWERS Benzamide, N-[1,2-dihydro-1-[2-C-methyl-3,5-bis-O-(trifluoroacetyl)- β -D-arabinofuranosyl]-2-oxo-4-pyrimidinyl]- (9CI) C21 H17 F6 N3 O8

Absolute stereochemistry.

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L20 32 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN
IN Cytidine, N-benzoyl-2'-deoxy-2'-fluoro-2'-methyl-, 3',5'-bis(trifluoroacetate), (2'R)- (9CI)
MF C21 H16 F7 N3 O7

Absolute stereochemistry.

Me CF3

R R R

O CF3

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L20 32 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN
IN Cytidine, 2'-deoxy-2'-fluoro-2'-methyl-, monohydrochloride, (2'R)- (9CI)
MF C10 H14 F N3 O4 . C1 H

Absolute stereochemistry. Rotation (+).

● HCl

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L20 32 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN
IN 9H-Purine, 6-chloro-9-(2-C-methyl-β-D-arabinofuranosyl)- (9CI)
MF C11 H13 C1 N4 O4

Absolute stereochemistry.

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L20 32 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN
IN 9H-Purine, 6-chloro-9-(3,5-di-O-acetyl-2-C-methyl-β-D-arabinofuranosyl)- (9CI)
MF C15 H17 C1 N4 O6

Absolute stereochemistry.

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L20 32 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN
IN 9H-Purine, 6-chloro-9-[(2R)-3,5-di-O-acetyl-2-deoxy-2-fluoro-2-methylβ-D-erythro-pentofuranosyl]- (9CI)
MF C15 H16 C1 F N4 O5

Absolute stereochemistry.

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L20 32 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN
IN 9H-Purine, 6-chloro-9-[(2R)-2-deoxy-2-fluoro-2-methyl-β-D-erythro-pentofuranosyl]- (9CI)
MF C11 H12 C1 F N4 O3

Absolute stereochemistry.

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

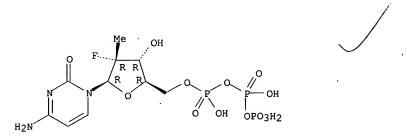
L20 32 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN
IN Adenosine, 2'-deoxy-2'-fluoro-2'-methyl-, monohydrochloride, (2'R)- (9CI)
MF C11 H14 F N5 O3 . C1 H

Absolute stereochemistry.

● HCl

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L20 32 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN IN Guanosine, 2'-deoxy-2'-fluoro-2'-methyl-, (2'R)- (9CI) MF C11 H14 F N5 O4

Absolute stereochemistry.

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L20 32 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN

Cytidine (8CI, 9CI) C9 H13 N3 O5 IN

MF

COM

Absolute stereochemistry.

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L20 32 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN IN 9H-Purine, 6-chloro-9- β -D-ribofuranosyl- (6CI, 7CI, 8CI, 9CI) MF C10 H11 C1 N4 O4

CI COM

Absolute stereochemistry.

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

ALL ANSWERS HAVE BEEN SCANNED